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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,944	12/29/2000	Kent L. Leung	CISCP137/2014	7952
22434	7590	04/21/2005	EXAMINER	
BEYER WEAVER & THOMAS LLP P.O. BOX 70250 OAKLAND, CA 94612-0250			HO, THOMAS M	
			ART UNIT	PAPER NUMBER
			2134	

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/751,944	LEUNG ET AL.
	Examiner	Art Unit
	Thomas M. Ho	2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 29 November 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-36 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-36 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 16 April 2001 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/7/05.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

1. The amendment of 11/29/05 has been received and entered.
2. Claims 1-36 are pending.

Response to Arguments

3. Applicant has argued on pages 12, last paragraph-13, first paragraph, that the particular amendment:

“The server being located outside the home network, wherein the server is in a network in which the Foreign Agent is located.” is not anticipated by Malkin and therefore patentable over Malkin.

However, the Examiner contends that Malkin does indeed teach the amended limitation that applicant recites. Malkin (Column 3, lines 15-20) teaches “For Example, to the perform authentication phase via an AS located in the service provider, the home network would have to reveal much of its user profile information to the service provider. This would also require the service provider make available significant amounts of additional storage space” Malkin discloses applicant’s amended limitation where the AS is located in the service provider(the foreign network) as opposed to the home network. Although Malkin strongly disparages such an embodiment, applicant’s limitation is nevertheless disclosed.

MPEP 2131.05 states:

A reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. The question whether a reference "teaches away" from the invention is inapplicable to an anticipation analysis. Celeritas Technologies Ltd. v. Rockwell International Corp., 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998) (The prior art was held to anticipate the claims even though it taught away from the claimed invention. "The fact that a modem with a single carrier data signal is shown to be less than optimal does not vitiate the fact that it is disclosed."). See also Atlas Powder Co. v. IRECO, Inc., 190 F.3d 1342, 1349, 51 USPQ2d 1943, 1948 (Fed. Cir. 1999) (Claimed composition was anticipated by prior art reference that inherently met claim limitation of "sufficient aeration" even though reference taught away from air entrapment or purposeful aeration.).

As per claim 10 as amended, the applicant has recited, "Malkin neither discloses nor suggests storing such a key that is shared between the Home Agent and the Foreign Agent in a PPP node profile. This shared key is well-known in the art to be used to generate a Foreign-Home authentication extension."

The Examiner would maintain that Applicant is 100% correct. Indeed, the shared key used to generate a Foreign-Home authentication extension IS well known in the art. For that reason, it does not patently distinguish over the prior art. In fact, the Examiner himself would not have been so bold as to make that statement as Applicant so did, and would have only taken official notice that sharing a stored key for authentication and encryption between two parties was well known at the time of invention.

Claim 10 is therefore rejected. (see below.)

As per claims 11,12 as amended, the examiner contends that the service selection by default is PPP, reading on Applicant's limitation.

Further arguments are believed to be addressed in the new grounds of rejection of the amended claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-9, 11-12, 14-17, 34-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Malkin et al.

In reference to claim 1:

Malkin et al. discloses an a Foreign agent supporting Mobile IP, a method of sending a registration request packet on behalf of a node that supports PPP but does not support Mobile IP, comprising:

- Accepting a call from the node, where the node calls the RAS (Column 1, line 64 – Column 2, line 1) (Column 2, lines 25-30)
- Receiving authentication information associated with a PPP authentication protocol from the node, the authentication information enabling a PPP node to be authenticated. (Figure 2a)
- Obtaining a PPP node profile associated with the authentication information, the PPP node profile including registration information associated with the node that enables proxy registration to be performed by the Foreign Agent on behalf of the node, the registration information associated with the node identifying a Home Agent associated with the node, where the node profile is garnered from the TMS to determine if the Foreign Node has an account. (Figure 2a, Item 212) Registration information is then later associated with the node for proxy registration(Column 5, lines 1-20) , where the proxy acts to negotiation control protocols with the foreign agent. (Column 5, lines 40-45)
- Composing a registration request packet including the registration information associated with the node. (Figure 2c, Item 232)
- Sending the registration request packet to the Home Agent on behalf of the node. (Figure 2c, Item 232)

In reference to claim 2:

Malkin et al. (Column 3, lines 40-45) & (Column 4, lines 15-20) discloses the method as recited in claim 1, wherein the authentication information includes a user ID submitted by the node during PPP authentication.

In reference to claim 3:

Malkin et al. (Column 4, lines 15-20) discloses the method as recited in claim 1, wherein the authentication information includes a password submitted by the node during PPP authentication.

In reference to claim 4:

Malkin et al. (Column 3, lines 30-45) discloses the method as recited in claim 1, wherein the PPP authentication is PAP or CHAP.

In reference to claim 5:

Malkin et al. (Column 4, line 58 – Column 5, line 20) discloses the method as recited in claim 1, wherein the registration request packet includes an extension including the authentication information.

In reference to claim 6:

Malkin et al. discloses the method as recited in claim 1, wherein obtaining a PPP node profile comprises:

- Composing a request packet for the node, the request packet including the authentication information. (Column 5, lines 1-5)
- Sending the request packet to a server, the server being adapted for performing authentication and for storing a profile for one or more nodes supporting PPP, the server being located outside the home network, wherein the server is in a network in which the Foreign Agent is located. (Column 3, lines 15-20)
- Receiving a reply packet from the server, the reply packet including at least a portion of a profile for the node. (Column 5, lines 28-35)

In reference to claim 7:

Malkin et al. (Column 4, lines 23-28) discloses the method as recited in claim 6, wherein the server is a TACACS+ or a RADIUS server.

In reference to claim 8:

Malkin et al. (Figure 1) discloses the method as recited in claim 6, wherein the server is coupled to the Foreign Agent, where the server is the AS which is coupled to the Foreign Agent, the service provider network.

In reference to claim 9:

Malkin et al. (Figure 1) discloses the method as recited in claim 6, wherein the server is coupled to a Home Agent associated with the node, where the server, the AS, is coupled with the Home Network, which is coupled to the Remote note.

In reference to claim 11:

Malkin et al. (Column 4, lines 45-60) discloses the method as recited in claim 1, the PPP node profile associated with the node further identifying a service selection, the service selection indicating that PPP service is normal PPP service, mobile IP service, or proxy module, where the service selection is identified by the permitted protocols.

In reference to claim 12:

Malkin et al. discloses the method as recited in claim 11, wherein composing the registration request packet is performed in response to obtaining the PPP node profile in which the service selection indicates that PPP service is proxy module IP service, where the node profile is first obtained (Column 4, lines 40-60) and then once user authentication is successful, the registration request packet is composed. (Column 4, lines 60-67)

In reference to claim 14:

Malkin et al. (Column 5, lines 5) discloses the method as recited in claim 1, the information associated with the node further identifying a Home Address for the node.

In reference to claim 15:

Malkin et al. discloses the method as recited in claim 14, further comprising:
Completing IPCP to establish and configure IP between the node and the Foreign Agent using the Home Address, where the IP is configured between the node and foreign agent through IP over PPP which is understood to be IPCP. (Column 4, lines 50-65) & (Column 5, lines 35-55)

In reference to claim 16:

Malkin et al. (Column 4, lines 50-65) discloses the method as recited in claim 1, further comprising:

Receiving a registration reply from the Home Agent, the registration reply identifying a Home Address for the node, where the reply from the home agent includes a profile containing the remote node IPCP address.

Claim 17 is rejected for the same reasons as claim 15.

Claims 34, 35, 36 are rejected for the same reasons as claim 1.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10, 13, 18-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malkin et al. and "Mobile IP: Design Principles and practices".

In reference to claim 10:

Malkin et al. fails to discloses the method as recited in claim 1, the information associated with the node further identifying a key to be shared between the Home Agent and the Foreign Agent for use in authenticating communications between the Home Agent and the Foreign Agent where the key to be shared is used to look up the profile in the TMS database in order to complete authentication.

The Examiner takes official notice that the shared key to be used to generate a Foreign Home authentication extension was well known in the art. Support may be found on page 13, 2nd paragraph of Applicant's arguments.

It would have been obvious to one of ordinary skill in the art at the time of invention to use a key between the Foreign and Home Agent for use in authenticating communications between the Home Agent and Foreign Agent in order to maintain security between the Home Agent and Foreign Agent parties, leaving the system less vulnerable.

In reference to claim 13:

Malkin et al. fails to disclose the method as recited claim 1, the PPP node profile associated with the node further indicating a registration lifetime for the node, where the registration lifetime is the lifetime the registration request has to be verified.

The Examiner takes official notice that having a registration lifetime for any type of registration was well known in the art at the time of invention. It is common practice that registration for things such as licenses, websites, user accounts will only last for a certain amount of time and will have a registration life time.

Malkin et al. (Column 5, lines 20-28) discloses that time is factor in the registration process but does not explicitly disclose a registration life time.

Mobile IP, p.78 discloses registration lifetimes.

It would have been obvious to one of ordinary skill in the art at the time of registration to include a registration lifetime for a particular registration in order to determine which registrations were still active, and discontinue support and save resources by not having to consider old or inactive registrations.

In reference to claim 18:

Malkin et al. (Column 5, lines 15-20) fails to explicitly discloses the method as recited in claim 1, further comprising:

Receiving a registration reply from the Home Agent, the registration reply including a proxy Mobile Node registration sequence number extension indicating a sequence number for a registration being performed on behalf of the node by the Foreign Agent, the sequence number indicating an order of the registration within a sequence of one or more registrations performed by one or more Foreign Agents on behalf of the node.

Malkin et al. however discloses receiving a registration reply from a Home Agent with one or more registrations performed on behalf of the node. (Column 5, lines 20-50)

Malkin et al. also discloses that the intended use of the invention is to provide open communication between the home network and the remote node using the Mobile IP protocol. (Column 5, lines 40-46)

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) reveals that one aspect of the Mobile IP protocol uses Sequence numbers to indicate a sequence number indicating the order of the transmissions of within a sequence of one or more transmissions that starts with the number zero, where the transmission type is an advertisement.

The Examiner furthermore takes official notice that giving a sequence number for a registration in order of registrations was well known at the time of invention. For Example, the patent office assigns registrations numbers to newly published patents in sequence as they are published. The

Examiner even notes that the Applicant's representative, Elise R, Heilbrunn even has a registration number 42,649 which occurs in sequence.

It would have been obvious to one of ordinary skill in the art at the time of invention to use aspects of the Mobile IP protocol in Malkin et al. in order to sequence registration numbers, in order to quickly reference the registrations in a well organized fashion.

In reference to claim 19:

“Mobile IP: Design Principles and practices” (Page 78, Section 4.8.1) discloses the method as recited in claim 18, further comprising:

Updating a registration table to associate the sequence number with the node, where the sequence number is a part of the Mobility Agent Advertisement Extension including the care of addresses. (page 45, Figure 3.3)

In reference to claim 20:

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) discloses the method as recited in claim 1, further comprising:

Receiving a registration reply from the Home Agent, the registration reply including a proxy Mobile Node extension indicating whether a registration being performed on behalf of the node is a re-registration by the foreign agent or an initial registration by the Foreign Agent, where

registration is an initial registration if the sequence number is zero, and is a re-registration if the sequence number is not zero.

In reference to claim 21:

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) & (Page 78, Section 4.8.1) discloses the method as recited in claim 20 further comprising:

Updating a registration table to indicate whether the registration being performed on behalf of the node is a re-registration by the Foreign Agent or an initial registration by the Foreign Agent, where the sequence number used can indicate if the registration is initial or a re-registration, and is updated in the registration table with the rest of the information of the Mobility Agent Advertisement Extension. (page 45, Figure 3.3)

Claim 22 is rejected for the same reasons as claim 18.

Claim 23 is rejected for the same reasons as claim 19.

Claim 24 is rejected for the same reasons used in claim 18.

Claim 25 is rejected for the same reasons as claim 19.

In reference to claim 26:

Malkin et al. discloses in a Home Agent supporting Mobile IP, a method of processing a registration request packet composed on behalf of a node that supports the Point-to-Point protocol, comprising:

- Determining from the registration indicator whether to accept registration of the node with the Home Agent, where one of the registration indicators is whether the registration request was replied to within a predetermined amount of time, and is accepted if it is. (Column 5, lines 20-27)
- Composing a registration reply packet indicating whether registration of the node with the Home Agent is accepted (Column 5, lines 28-35)
- Sending the registration reply packet to the Foreign Agent, where the sent packet is received by the Foreign Agent (Column 5, lines 28-35)

Malkin et al. fails to explicitly disclose

- Receiving the registration request packet from a Foreign agent that is performing proxy registration on behalf of the node, the registration request packet including a registration indicator indicating whether registration being performed by the Foreign agent on behalf of the node is a re-registration by the Foreign Agent or an initial registration by the Foreign Agent

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) discloses

- Receiving the registration request packet from a Foreign agent that is performing proxy registration on behalf of the node, the registration request packet including a registration indicator indicating whether registration being performed by the Foreign agent on behalf of the node is a re-registration by the Foreign Agent or an initial registration by the

Foreign Agent, where registration is an initial registration if the sequence number is zero, and is a re-registration if the sequence number is not zero.

Malkin et al. also discloses that the intended use of the invention is to provide open communication between the home network and the remote node using the Mobile IP protocol. (Column 5, lines 40-46)

It would have been obvious to one of ordinary skill in the art at the time of invention to use aspects of the Mobile IP protocol in Malkin et al. because Malkin et al. discloses the usage of the Mobile IP protocol, though for brevity, fails to explicitly disclose that particular detail of the protocol.

Claim 27 is rejected for the same rationale as claim 21.

In reference to claim 28:

Malkin et al. discloses in a Home Agent supporting Mobile IP, a method of processing Registration request packet composed on behalf of a node that supports the Point-to-Point Protocol, comprising:

- Composing a registration reply packet indicating whether registration of the node with the Home Agent is accepted. (Column 5, lines 25-35)
- Sending the registration reply packet to the Foreign Agent. (Column 5, lines 25-35)

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) discloses

- Receiving the registration request packet from a Foreign Agent that is performing proxy registration on behalf of the node, the registration request packet including a sequence number indicating an order within the sequence of one or more registrations performed by one or more Foreign Agents on behalf of the node, where the packet includes the sequence number among other pieces of data. (Figure 3.3, Page 45)
- Determining from the sequence number whether to accept registration of the node with the Home Agent, where a registration is not accepted if no rebooting of the foreign agent occurs, for example in a rollover of the foreign agent because the registration is still the same registration. (Page 50, Section 3.5.2)

Malkin et al. also discloses that the intended use of the invention is to provide open communication between the home network and the remote node using the Mobile IP protocol. (Column 5, lines 40-46)

It would have been obvious to one of ordinary skill in the art at the time of invention to use aspects of the Mobile IP protocol in Malkin et al. because Malkin et al. discloses the usage of the Mobile IP protocol, though for brevity, fails to explicitly disclose that particular detail of the protocol.

Claim 29 is rejected for the same reasons as claim 18.

In reference to claim 30:

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) discloses the method as recited in claim 28, further comprising:

- Determining from the sequence number whether the registration request packet corresponds to an initial registration of the node with the Home Agent, where the registration is initial is the sequence number is zero.
- When the sequence number indicates that the registration request packet corresponds to the initial registration of the node with the Home Agent, indicating in the registration reply that registration of the node with the Home Agent is accepted, where if the registration corresponds to the initial registration of the node the mobile node is registered.

In reference to claim 31:

“Mobile IP: Design Principles and practices” (Page 50, Section 3.5.2) & (Page 78, Section 4.8.1) discloses the method as recited in claim 30, further comprising wherein when the sequence number indicates that the registration request packet corresponds to the initial registration of the node with the Home Agent, incrementing the sequence number to create an updated sequence number, creating an entry in a mobility binding table associating the updated sequence number with the node, and providing the updated sequence number in the registration reply, where sequence number is incremented by one each subsequent time.

In reference to claims 32 and 33:

Both claims 32 and 33 specifically recite claim limitations that disclose a comparison of either a second sequence number to be compared or a second care of address to be compared with one that has been previously registered with the registration table or mobility binding table(also effectively a registration table)

“Mobile IP: Design Principles and practices” fails to explicitly disclose the

- When the data values(sequence number or care of address) to be compared are not equal to the ones found in the registration table, the registration reply packet is denied.
- When the data values(sequence number or care of address) to be compared are equal to the ones found in the registration table, the registration reply packet is accepted.

“Mobile IP: Design Principles and practices” (Page 78, Section 4.8.1) discloses that with regards to the mobility binding list, that the home agent is required to create or modify an entry regarding a Mobile Node’s care of address and registration lifetime, such as that indicated in the format of the packet in (figure 3.3, page 45)

The Examiner takes official notice that it was obvious at the time of invention to deny an authentication or disallow full access, if one or more characteristics of a verification process were found to be unmatching.

Examples are Malkin et al. (Column 4, lines 15-20) and

“Mobile IP: Design Principles and practices” Page 79, Item 3 further indicates that during the validity checking process, if no foreign home extension is found, the home agent is required in the reply to reject the registration.

“Mobile IP: Design Principles and practices” Page 63, Item 133 also indicates that a registration by the foreign agent may be denied if there is a mismatch in the identification.

This method is also common to password and authentication processes.

It would have been obvious to one of ordinary skill in the art at the time of invention to deny the registration reply packet if any information characteristics of a registration between a Home agent and a mobile node, including a sequence number and care of address, were found to be unmatching, in order to prevent mismatching registrations or registrations without the proper parameters from being allowed and consequently avoiding errors.

Conclusion

8. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of the final action and the advisory action is not mailed under after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension pursuant to 37 CFR 1.136(A) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication from the examiner should be directed to Thomas M Ho whose telephone number is (571)272-3835. The examiner can normally be

reached on M-F from 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory A. Morse can be reached on (571)272-3838.

The Examiner may also be reached through email through Thomas.Ho6@uspto.gov

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.

General Information/Receptionist Telephone: 571-272-2100 Fax: 703-872-9306
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TMH

April 15th, 2005


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